Souder, Miller & Associates♦201 S. Halagueno St.♦Carlsbad, NM 88220
(575) 689-8801

July 5, 2019

722TV-190809-C-1410

#5E27957-BG12

NMOCD District I
1625 N. French Drive
Hobbs, New Mexico 88240

SUBJECT: Remediation Closure Report for the 1009 Pipeline Release (1RP-5596), Lea County, New Mexico

To Whom it May Concern,

On behalf of Enterprise Field Services LLC (Enterprise), Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the 1009 Pipeline site. All impacted areas meet closure criteria of NMAC 19.15.29 and SMA recommends no further action. The site is in Section 36, Township 21S, Range 32E, Lea County, New Mexico, on privately-owned land. Figure 1 illustrates the vicinity and site location on an USGS 7.5-minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	1009 Pipeline	Company	Enterprise Field Services LLC
API Number	N/A	Location	32.432519 -103.619869
Incident Number	1RP-5596		
Estimated Date of Release	5/16/2019	Date Reported to NMOCD	5/23/2019
Land Owner	Private	Reported To	NMOCD District I
Source of Release	Internal Corrosion and a controlled blowdown during repairs		
Released Volume	778.7 Mcf; 2 bbls	Released Material	Natural Gas; pipeline liquids
Recovered Volume	N/A	Net Release	778.7 Mcf; 2 bbls
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	6/13/2019		

1.0 Background

On May 16, 2019, a gas release occurred due to a controlled blow down, and a subsequent leak occurred, which resulted in 778.7 mcf of natural gas with 2 bbls of pipeline fluids being released. Initial response activities were conducted by the operator, and included source elimination, pipeline repair and site stabilization. Figures 1 and 2 illustrate the vicinity and site location, Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

This 1009 Pipeline release location is located approximately 36 miles east of Carlsbad, New Mexico on privately-owned land at an elevation of approximately 3697 feet above mean sea level (amsl).

Based upon New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) well data, depth to groundwater in the area is estimated to be between 200 and 330 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the NMOSE online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed June 18, 2019; Appendix B). The nearest significant watercourse is an unnamed intermittent stream, located approximately 5,480 feet to the south. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. The top four feet of the location has been restored to meet the reclamation standard of 19.15.29.13.(D)1 NMAC and the remainder of the site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

At the request of Enterprise, on June 13, 2019, SMA collected composite soil samples from the excavated area exposed for pipeline repair activities to ensure that the release was properly remediated. The excavation measured approximately 10 feet by 50 feet by 5 feet deep. Three samples (BH1-BH3) were collected from beneath the exposed pipeline at depths from 4 to 5 feet below grade surface (bgs). In addition, four (4), five-point composite sidewall samples (North SW, South SW, East SW and West SW) were collected.

A total of seven (7) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

As summarized in Table 3, results indicated all samples met NMOCD Closure Criteria. The required photo of the excavation is included in Appendix C.

Figure 3 shows the extent of the excavation and sample locations. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

In addition to meeting the Closure Criteria, the top four (4) feet of impacted areas meet the Reclamation requirements of 19.15.29.13(D)(1). Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at an NMOCD permitted disposal facility.

4.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Melodie R. Sanjari at 574-370-9782 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

M. Sanjari

Melodie R. Sanjari
Staff Scientist

Reviewed by:

Shawna Chubbuck

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map
Figure 2: Surface Water Radius Map
Figure 3: Site and Sample Location Map

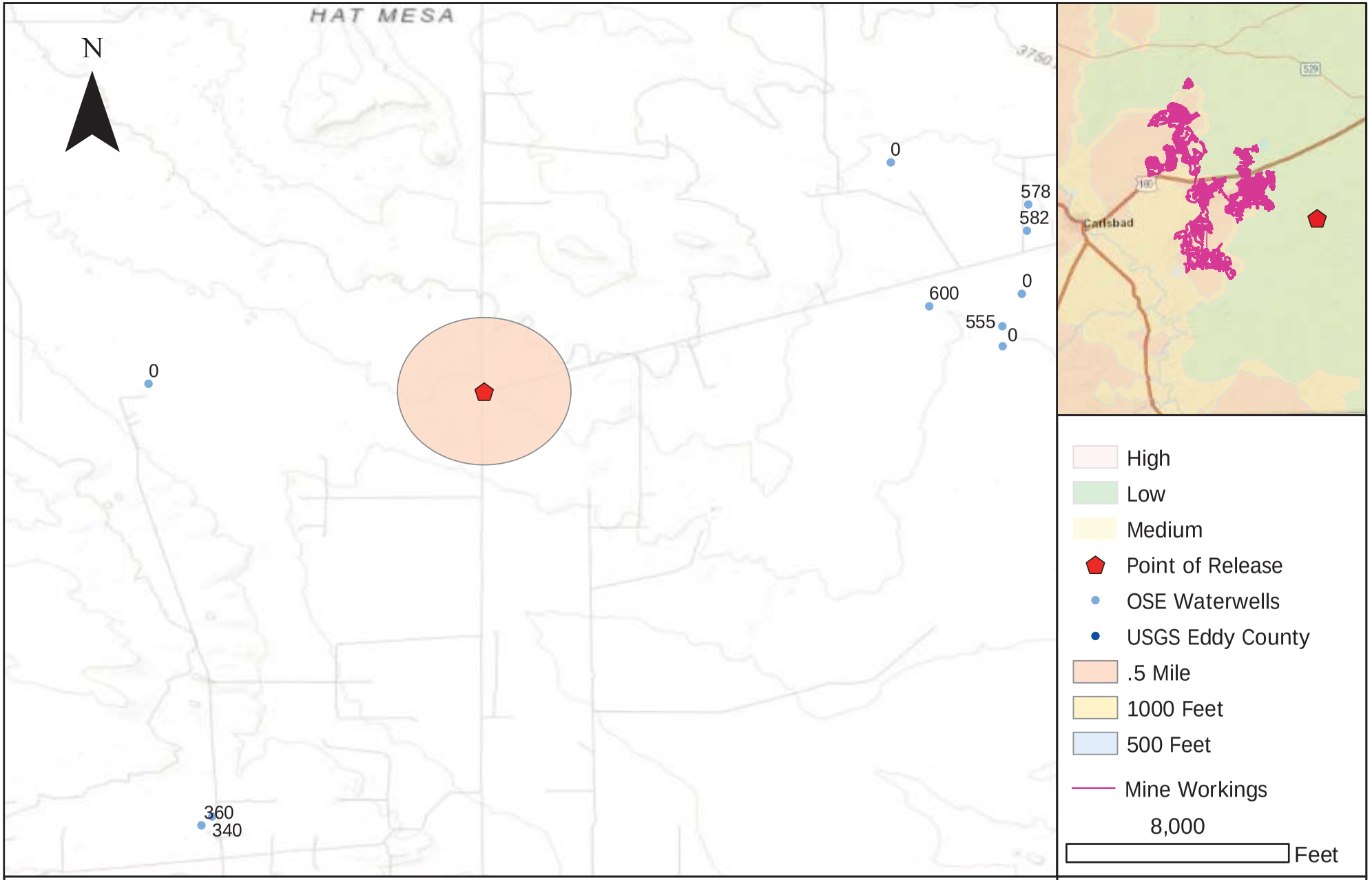
Tables:

Table 2: NMOCD Closure Criteria Justification
Table 3: Summary of Sample Results

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
1009 Pipeline Release (1RP-5596) - Enterprise
Sec 36 T21S R32E, Lea County, New Mexico

Figure 1

P:\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

Date Saved: 7/3/2019

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn MRS
Date 7/3/2019
Checked
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
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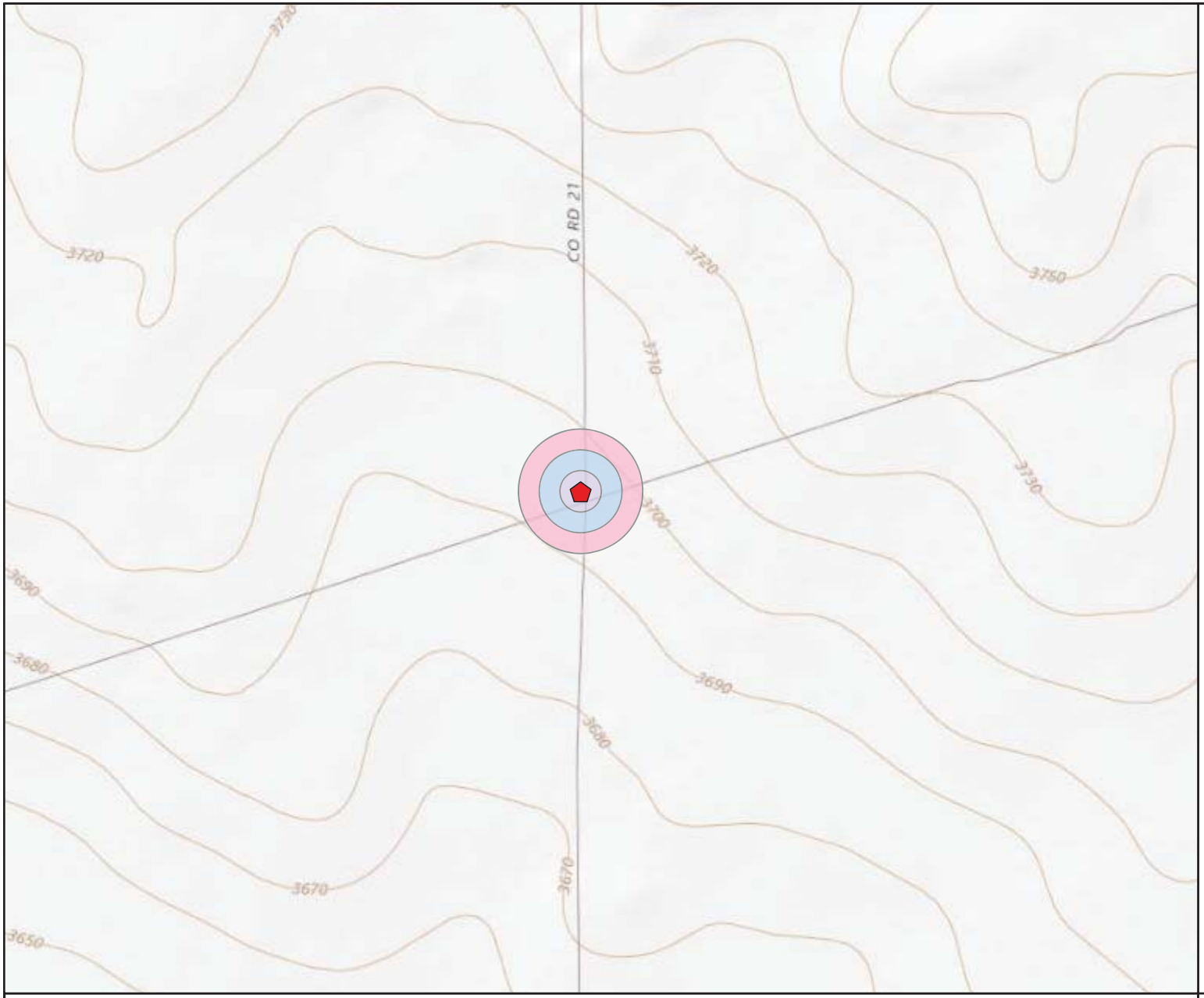

Surface Water Protection Map
1009 Pipeline Release (1RP-5596) - Enterprise
Sec 36 T21S R32E, Lea County, New Mexico

Figure 2

P:\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

Date Saved: 7/3/2019

Revisions
By: Date: Descr:
By: Date: Descr:

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Date 7/3/2019
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SMA

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Legend

- SW Sample Locations
- BH Sample Locations
- Point of Release
- 1009 Pipeline
- Excavation

N

0 5 10 20 Feet

Site and Sample Location Map
1009 Line Release - Enterprise
Sec 36 T21S R32E, Lea County, New Mexico

Figure 3

P:\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

Date Saved: 7/3/2019

Revisions

By:_____ Date:_____ Descr:_____

By:_____ Date:_____ Descr:_____

Drawn MRS
Date 7/3/2019
Checked
Approved

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TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	200-330	NMOSE/USGS
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	N/A	
Hortizontal Distance to Nearest Significant Watercourse (ft)	5480	unnamed intermittant stream to the south

Closure Criteria (19.15.29.12.C(4) and Table 1 NMAC)						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	x	20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	no					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
<100' from wetland?	no					
within area overlying a subsurface mine	no					
within an unstable area?	no					
within a 100-year floodplain?	no					

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10				2500	20000
BH1	6/13/2019	4	<0.225	<0.025	<5.0	<9.4	<47	<61.4	<60
BH2		4	<0.222	<0.025	<4.9	<9.6	<48	<62.5	<60
BH3		5	<0.225	<0.025	<5.0	<9.3	<46	<60.3	<60
North SW		sidewall	<0.224	<0.025	<5.0	<9.2	<46	<60.2	<60
South SW		sidewall	<0.224	<0.025	<5.0	<9.9	<49	<63.9	<60
East SW		sidewall	<0.224	<0.025	<5.0	<9.4	<47	<61.4	370
West SW		sidewall	<0.225	<0.025	<5.0	<9.7	<48	<62.7	<60

"--" = Not Analyzed

APPENDIX A
FORM C141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NDHR1918343002
District RP	1RP-5596
Facility ID	fDHR1914962028
Application ID	pDHR1918342222

Release Notification

Responsible Party

Responsible Party	Enterprise Field Services LLC	OGRID	241602
Contact Name	Alena Miro	Contact Telephone	575-628-6802
Contact email	ammiro@eprod.com	Incident # *(assigned by OCD)*	NDHR1918343002
Contact mailing address	PO Box 4324, Houston, TX 77210		

Location of Release Source

Latitude N32.432519 Longitude W -103.619869
(NAD 83 in decimal degrees to 5 decimal places)

Site Name 1009 Pipeline	Site Type Pipeline ROW
Date Release Discovered 5/16/2019	API# *(if applicable)* N/A

Unit Letter	Section	Township	Range	County
I	36	21S	32E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private : N/A

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☒ Natural Gas	Volume Released (Mcf) 778.7 MCF	Volume Recovered (Mcf) 0 MCF
☒ Other (describe)	Volume/Weight Released (provide units) Pipeline Liquids - 2 bbl	Volume/Weight Recovered (provide units) 0 bbl

Cause of Release: Internal corrosion.

The preliminary assessment of the release estimated of 2 bbls of pipeline liquids and 1.7 Mscf of gas were released due to the leak and 777 Mscf of gas was release due to a controlled blowdown of the pipeline to facilitate repairs.

State of New Mexico
Oil Conservation Division

Incident ID	NDHR1918343002
District RP	1RP-5596
Facility ID	fDHR1914962028
Application ID	pDHR1918342222

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release is considered a major release as the estimated volume of gas released exceeded the major release thresholds as defined in 19.15.29.7(A).
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes; Jim Griswold was notified via email of all information contained in the initial notification C-141 form on 5/17/2019 at 9:20 am	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E Fields Date: 5-23-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Dylan Rose-Coss Date: 07/02/2019

APPENDIX B
NMOSE WELLS REPORT

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01701 POD1		CP	LE		1	3	35	21S	32E	626652	3589283	3098	840	560	280
CP 00854 POD1		CP	LE	1	1	2	33	21S	33E	633879	3590223	4250	950	600	350
CP 00601 POD1		CP	LE		2	1	28	21S	33E	633502	3591791*	4550	223		
CP 01356 POD1		CP	LE	4	2	2	33	21S	33E	634560	3590014	4875	1098	555	543

Average Depth to Water: **571 feet**
Minimum Depth: **555 feet**
Maximum Depth: **600 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 629750 **Northing (Y):** 3589217 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 322702103344002

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

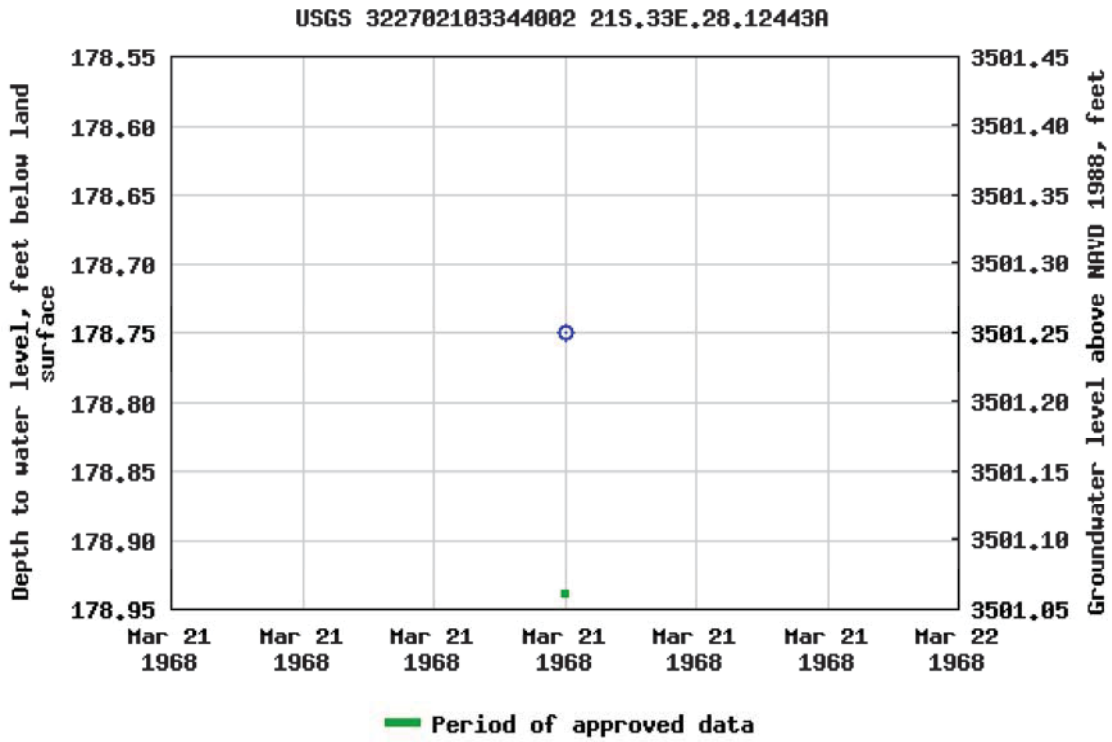
USGS 322702103344002 21S.33E.28.12443A

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°27'02", Longitude 103°34'40" NAD27
Land-surface elevation 3,680 feet above NAVD88
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-06-18 11:19:31 EDT
1.04 0.95 nadww01

National Water Information System: Web Interface

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 322314103383601

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

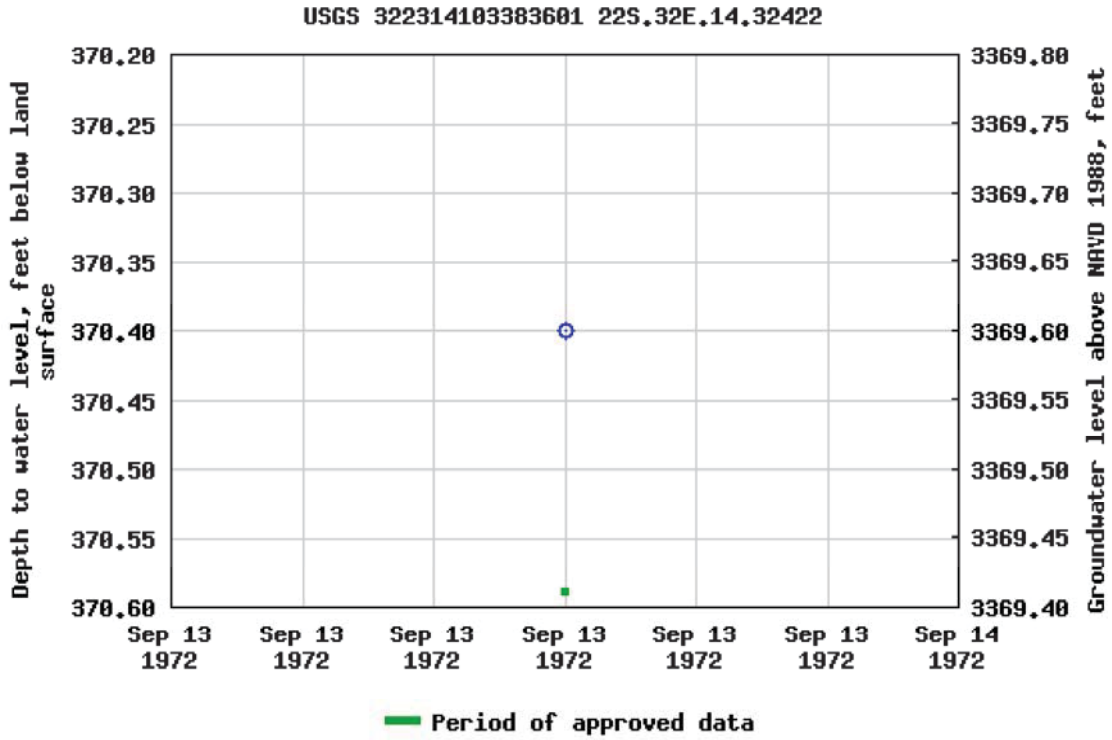
USGS 322314103383601 22S.32E.14.32422

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code --
Latitude 32°23'14", Longitude 103°38'36" NAD27
Land-surface elevation 3,740 feet above NAVD88
The depth of the well is 380 feet below land surface.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
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Explanation of terms
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News

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-06-18 11:22:27 EDT
1.01 0.95 nadww01

APPENDIX C
PHOTO LOG

Photo Taken June 13,2019

Facing West

32.4325, -103.6203028

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Analytical Report
Lab Order **1906790**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: North SW
Project: 1009 Non Reportable
Collection Date: 6/13/2019 11:00:00 AM
Lab ID: 1906790-001 **Matrix:** SOIL **Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 12:00:57 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/21/2019 9:38:49 AM	45707
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/21/2019 9:38:49 AM	45707
Surr: DNOP	93.8	70-130		%Rec	1	6/21/2019 9:38:49 AM	45707
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 9:23:36 PM	45609
Surr: BFB	99.9	73.8-119		%Rec	1	6/17/2019 9:23:36 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 9:23:36 PM	45609
Toluene	ND	0.050		mg/Kg	1	6/17/2019 9:23:36 PM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 9:23:36 PM	45609
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 9:23:36 PM	45609
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	6/17/2019 9:23:36 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: South SW
Project: 1009 Non Reportable
Collection Date: 6/13/2019 11:15:00 AM
Lab ID: 1906790-002 **Matrix:** SOIL **Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 12:13:21 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2019 10:02:58 AM	45707
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2019 10:02:58 AM	45707
Surr: DNOP	81.5	70-130		%Rec	1	6/21/2019 10:02:58 AM	45707
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 9:46:14 PM	45609
Surr: BFB	101	73.8-119		%Rec	1	6/17/2019 9:46:14 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 9:46:14 PM	45609
Toluene	ND	0.050		mg/Kg	1	6/17/2019 9:46:14 PM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 9:46:14 PM	45609
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 9:46:14 PM	45609
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	6/17/2019 9:46:14 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: West SW
Project: 1009 Non Reportable
Collection Date: 6/13/2019 11:30:00 AM
Lab ID: 1906790-003 **Matrix:** SOIL **Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	370	60		mg/Kg	20	6/20/2019 12:50:35 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/19/2019 3:28:43 AM	45630
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/19/2019 3:28:43 AM	45630
Surr: DNOP	158	70-130	S	%Rec	1	6/19/2019 3:28:43 AM	45630
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 10:09:05 PM	45609
Surr: BFB	101	73.8-119		%Rec	1	6/17/2019 10:09:05 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 10:09:05 PM	45609
Toluene	ND	0.050		mg/Kg	1	6/17/2019 10:09:05 PM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 10:09:05 PM	45609
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 10:09:05 PM	45609
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	6/17/2019 10:09:05 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: East SW
Project: 1009 Non Reportable
Collection Date: 6/13/2019 12:00:00 PM
Lab ID: 1906790-004 **Matrix:** SOIL **Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 1:03:00 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2019 2:06:01 PM	45630
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 2:06:01 PM	45630
Surr: DNOP	97.8	70-130		%Rec	1	6/21/2019 2:06:01 PM	45630
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 10:55:01 PM	45609
Surr: BFB	105	73.8-119		%Rec	1	6/17/2019 10:55:01 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 10:55:01 PM	45609
Toluene	ND	0.050		mg/Kg	1	6/17/2019 10:55:01 PM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 10:55:01 PM	45609
Xylenes, Total	ND	0.10		mg/Kg	1	6/17/2019 10:55:01 PM	45609
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	6/17/2019 10:55:01 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH1-4
Project: 1009 Non Reportable
Collection Date: 6/13/2019 1:30:00 PM
Lab ID: 1906790-005 **Matrix:** SOIL
Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 1:15:25 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/21/2019 2:30:21 PM	45630
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/21/2019 2:30:21 PM	45630
Surr: DNOP	104	70-130		%Rec	1	6/21/2019 2:30:21 PM	45630
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 11:17:55 PM	45609
Surr: BFB	104	73.8-119		%Rec	1	6/17/2019 11:17:55 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 11:17:55 PM	45609
Toluene	ND	0.050		mg/Kg	1	6/17/2019 11:17:55 PM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 11:17:55 PM	45609
Xylenes, Total	ND	0.10		mg/Kg	1	6/17/2019 11:17:55 PM	45609
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/17/2019 11:17:55 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH2-4
Project: 1009 Non Reportable
Collection Date: 6/13/2019 1:45:00 PM
Lab ID: 1906790-006 **Matrix:** SOIL
Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 1:52:38 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/19/2019 5:30:56 AM	45630
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 5:30:56 AM	45630
Surr: DNOP	126	70-130		%Rec	1	6/19/2019 5:30:56 AM	45630
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/17/2019 11:40:55 PM	45609
Surr: BFB	105	73.8-119		%Rec	1	6/17/2019 11:40:55 PM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/17/2019 11:40:55 PM	45609
Toluene	ND	0.049		mg/Kg	1	6/17/2019 11:40:55 PM	45609
Ethylbenzene	ND	0.049		mg/Kg	1	6/17/2019 11:40:55 PM	45609
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 11:40:55 PM	45609
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	6/17/2019 11:40:55 PM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH3-5
Project: 1009 Non Reportable
Collection Date: 6/13/2019 2:00:00 PM
Lab ID: 1906790-007 **Matrix:** SOIL **Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/20/2019 2:05:03 PM	45705
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/19/2019 5:55:21 AM	45630
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/19/2019 5:55:21 AM	45630
Surr: DNOP	126	70-130		%Rec	1	6/19/2019 5:55:21 AM	45630
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 12:03:51 AM	45609
Surr: BFB	104	73.8-119		%Rec	1	6/18/2019 12:03:51 AM	45609
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/18/2019 12:03:51 AM	45609
Toluene	ND	0.050		mg/Kg	1	6/18/2019 12:03:51 AM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 12:03:51 AM	45609
Xylenes, Total	ND	0.10		mg/Kg	1	6/18/2019 12:03:51 AM	45609
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	6/18/2019 12:03:51 AM	45609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **1906790** RcptNo: **1**

Received By: **Jevon Campisi** **6/14/2019 9:00:00 AM** Jevon Campisi

Completed By: **Leah Baca** **6/14/2019 11:58:40 AM** Leah SBaca

Reviewed By: LB 6/14/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑

    # of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
    Adjusted? ____
    Checked by: ____

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

    Person Notified: ____ Date ____
    By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
    Regarding: ____
    Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			
2	2.3	Good	Yes			

Chain-of-Custody Record

Client: SMA-Carlsbad.

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 day.

Project Name: 1009 Non Reportable

Project #:

Project Manager: Heather Patterson

Sampler: MRS.

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906790	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/13	11:00	soil	North SW	4oz.		-001	✓	✓					✓			
	11:15		South SW			-002										
	11:30		West SW			-003										
	12:00		East SW			-004										
	1:30		BH1-4'			-005										
	1:45		BH2-4'			-006										
	2:00		BH3-5'			-007										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/13/19	1500	M Gurjani			6/13/19	1500
6/13/19	1900			Courier	6-14-19	9:00

Remarks: Enterprise.
① 5.1°C - 0.2CF = 4.9°C
② 2.5°C - 0.2CF = 2.3°C